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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,990	02/15/2002	Masanobu Yamamoto	ASA-1064	9193
24956	7590	09/16/2004	EXAMINER	
MATTINGLY, STANGER & MALUR, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			DUNCAN, MARC M	
			ART UNIT	PAPER NUMBER
			2113	

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,990

Applicant(s)

YAMAMOTO ET AL.

Examiner

Marc M Duncan

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Status of the Claims

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 2, 4, 5, 6, 8, 9, 10, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al.

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Skogman et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Hemphill et al.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A computer program is not considered statutory subject matter. The claim must state "computer executable instructions embedded on a computer readable medium that when executed," etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2113

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 6, 8, 9, 10, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al.

Regarding claim 1:

Chen teaches maintenance/management-subjected machine being comprised of a main machinery section, a first maintenance/management processing unit and a second maintenance/management processing unit which are connected to said information network and have first and second logical addresses, respectively, on said information network in Fig. 2 and col. 4 lines 14-15.

Chen teaches a step a) of executing maintenance/management processing for said main machinery section by means of said first maintenance/management processing unit on the basis of commands of said maintenance/management control equipment while placing said second maintenance/management processing unit in a standby state, when said first maintenance/management processing unit is operating in col. 2 lines 16-21.

Chen teaches a step b) in which upon detection of abnormality of said first maintenance/management processing unit, said second maintenance/management processing unit placed in the standby state takes over maintenance/management processing for said main machinery section from said first maintenance/management processing unit by rewriting said second logical address assigned to said second

Art Unit: 2113

maintenance/management processing unit to said first logical address assigned to said first maintenance/management processing unit, said first logical address being different from said second logical address in col. 2 lines 16-42.

Regarding claim 2:

Chen teaches said step b) including the substep of: supervising operation of said first maintenance/management processing unit by means of said second maintenance/management processing unit for thereby detecting occurrence of abnormality in said first maintenance/management processing unit in col. 2 lines 18-21.

Regarding claim 4:

Chen teaches wherein said main machinery section is implemented as a disk array system in Fig. 3 and col. 5 lines 18-20.

Regarding claim 5:

Chen teaches said step b) including the substep of: responding to detection of abnormality taking place in said first maintenance/management processing unit by interrupting power supply to said first maintenance/management processing unit in precedence to rewriting of the logical address of said second maintenance/management processing unit in col. 2 lines 21-35.

Regarding claim 6:

Chen teaches wherein power supply systems are provided separately for said first maintenance/management processing unit and said second maintenance/management processing unit, respectively, said method further comprising: a step in which upon detection of abnormality in a power supply system for

Art Unit: 2113

said first maintenance/management processing unit, said second maintenance/management processing unit placed in the standby state takes over maintenance/management processing for said main machinery section from said first maintenance/management processing unit by rewriting said second logical address assigned to said second maintenance/management processing unit to said first logical address assigned to said first maintenance/management processing unit, said first logical address being different from said second logical address in Fig. 2, Fig. 3 col. 2 lines 21-35. It is inherent in the system depicted in Fig. 2 and Fig. 3 that the two maintenance/management processing units contain separate power supply systems.

Regarding claim 8:

Chen teaches further comprising a step in which said first maintenance/management processing unit copies maintenance/management information concerning at least said main machinery section to said auxiliary maintenance/management processing unit in the course of operation of said first maintenance/management processing unit in col. 6 lines 23-42.

Regarding claim 9:

The claim is rejected as the system for performing the method of claim 1.

Regarding claim 10:

Chen teaches wherein said first maintenance/management processing unit and said second maintenance/management processing unit include first and second power supply units independent of each other, and wherein said control logic is so designed that upon detection of abnormality in said first maintenance/management processing

Art Unit: 2113

unit, power supply to said first maintenance/management processing unit from said first power supply unit is interrupted in Fig. 2, Fig. 3 and col. 2 lines 21-35. It is inherent in the system depicted in Fig. 2 and Fig. 3 that the two maintenance/management processing units contain separate power supply systems.

Regarding claim 11:

Chen teaches a first information processing unit and a second information processing unit both connected to an information network and assigned with different logical addresses, respectively, said first information processing unit and said second information processing unit being arranged to be capable of interchanging each other in Fig. 2, Fig. 3 and col. 2 lines 16-42.

Chen teaches a first power supply unit for feeding electric power to said first information processing unit in Fig. 2 and Fig. 3. It is inherent in the system depicted in Fig. 2 and Fig. 3 that the two maintenance/management processing units contain separate power supply systems.

Chen teaches a second power supply unit for feeding electric power to said second information processing unit independently from said first power supply unit in Fig. 2 and Fig. 3. It is inherent in the system depicted in Fig. 2 and Fig. 3 that the two maintenance/management processing units contain separate power supply systems.

Chen teaches wherein when said second information processing unit includes operation supervising means for supervising operation of said first information processing unit in the course of operation of said first information processing unit in col. 2 lines 18-21.

Chen teaches wherein when said operation supervising means detects occurrence of abnormality in the operation of said first information processing unit, the second information processing unit responds thereto by interrupting power supply to said first information processing unit from said first power supply unit while logical address assigned to said second information processing unit is replaced by logical address assigned to said first information processing unit in col. 2 lines 21-35.

Regarding claim 12:

The claim is rejected as the computer readable medium containing computer executable instructions that, when executed, cause the system to perform the method of claim 1.

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Skogman et al.

Regarding claim 1:

Skogman teaches maintenance/management-subjected machine being comprised of a main machinery section, a first maintenance/management processing unit and a second maintenance/management processing unit which are connected to said information network and have first and second logical addresses, respectively, on said information network in Fig. 1 and col. 3 lines 38-50.

Skogman teaches a step a) of executing maintenance/management processing for said main machinery section by means of said first maintenance/management processing unit on the basis of commands of said maintenance/management control equipment while placing said second maintenance/management processing unit in a

Art Unit: 2113

standby state, when said first maintenance/management processing unit is operating in col. 3 lines 28-37.

Skogman teaches a step b) in which upon detection of abnormality of said first maintenance/management processing unit, said second maintenance/management processing unit placed in the standby state takes over maintenance/management processing for said main machinery section from said first maintenance/management processing unit by rewriting said second logical address assigned to said second maintenance/management processing unit to said first logical address assigned to said first maintenance/management processing unit, said first logical address being different from said second logical address in col. 4 lines 22-37 and lines 44-47.

Regarding claim 3:

Skogman teaches said step b) including the substep of: supervising operation of said first maintenance/management processing unit by means of said main machinery section for thereby detecting abnormality taking place in said first maintenance/management processing unit in col. 4 lines 48-54. The controller is a part of the main machinery section.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2113

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Hemphill et al.

Regarding claim 7:

The teachings of Chen are outlined above.

Chen does not explicitly teach a step in which said first maintenance/management processing unit confirms operations of said second maintenance/management processing unit placed in the standby state in the course of operation of said first maintenance/management processing unit. Chen does, however, teach the standby unit being a primary unit for other operations while being a standby unit for another primary unit in col. 5 lines 50-53. Chen also teaches that a standby unit checks the health of the primary unit (see above citations).

Hemphill teaches a step in which said first maintenance/management processing unit confirms operations of said second maintenance/management processing unit placed in the standby state in the course of operation of said first maintenance/management processing unit in the Abstract.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the concurrent back-up teachings of Hemphill with the primary-standby teachings of Chen.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Hemphill teaches that by using two units as active units, while also being standby units for each, costs associated with fault tolerance can be greatly reduced.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art not relied upon contains elements of the instant claims and/or represents a current state of the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc M Duncan whose current telephone number is 703-305-4622. The examiner's telephone number as of October 15, 2004 will be 571-272-3646. The examiner can normally be reached on M-T and TH-F 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 703-305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

md


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